

PATENT
PATENT APP. SER. NO. 10/046,404
ECLIPSE GROUP DOCKET NO. H103027USU (P02017US)

REMARKS

Claims 1-8 and 11-28 are presently pending before the Board in Appeal No. 2009-003277. On August 20, 2009, the Board rejected Claims 1-8 and 11-28 as indefinite under 35 U.S.C. § 112, second paragraph, which is a new ground of rejection not on appeal. The Board did not address the prior art rejections on appeal.

Applicants hereby request reconsideration by the Examiner under 37 C.F.R. § 41.50(b)(1). Applicants have amended claims 1, 7, and 12-14 by deleting the term ruled indefinite by the Board. No new matter is added by the amendments. In addition, Applicants have deleted claims 2, 8, 20 and 23 as reciting redundant subject matter. Applicants respectfully submit that the new rejection by the Board is now moot.

I. THE BOARD'S REJECTION UNDER 35 U.S.C. § 112, SECOND PARAGRAPH

In its August 20, 2009 Decision, the Board rejected independent claims 1, 7, and 12-14 as indefinite under 35 U.S.C. § 112, second paragraph. In finding claims 1, 7, and 12-14 indefinite, the Board stated that the term "least-energy-surface" is not sufficiently clear to enable a person of ordinary skill in the art to determine the metes and bounds of the appealed claims. Applicants have amended independent claims 1, 7, and 12-14 by deleting the term "least-energy-surface" and replacing it with the term "surface." Nevertheless, Applicants respectfully submit that the Board erred in finding claims 1, 7, and 12-14 indefinite.

The Board stated:

The Specification does not provide any express definition for what constitutes a least-energy surface, Rather, it merely recites *examples* of what may constitute a least-energy-surface:

[(1)] A least-energy-surface *may be* a surface that passes through the specified controlling geometry in a manner that provides the minimum change in curvature when the rate of change of local curvature is integrated in the mathematical sense (summed) over the entire surface. [(2)] *Alternately*, the least-energy-surface *may be* mathematically one of the simplest equations representing the surface. *Typically*, this *may be* represented by the lowest order polynomial, or the factored expression with the least number of poles and zeroes that causes a surface to go through the curves.

PATENT
PATENT APP. SER. NO. 10/046,404
ECLIPSE GROUP DOCKET NO. H103027USU (P02017US)

The first example explains that a least-energy-surface may be a surface passing through the control curves in a configuration such that the truly minimal change in curvature is achieved. However, the second example indicates that other surfaces, not possessing the truly minimal energy, may also be deemed to be a least-energy-surface so long as they merely satisfy any of the variously recited mathematical approximations of a true least-energy-surface.

August 20, 2009 Decision of the Board, pg. 6-7.

The Board found that the Specification provides conflicting examples of what constitutes a "least-energy-surface." The Board further stated:

As such, even if one were to interpret the claim language broadly as covering both (1) truly minimal least-energy-surfaces and also (2) mere approximations of a least-energy-surface, one would still not be put on reasonable notice of which approximations are intended to be included within, or alternatively excluded from, the scope of the claims.

Applicants respectfully submit that the Board erred in finding that the two alternative interpretations amount to "(1) truly minimal least-energy-surfaces and also (2) mere approximations of a least-energy-surface," which the Board considered to be conflicting interpretations. Applicants respectfully submit that the alternatives provided in the Specification are not conflicting at all.

Applicants note that the term "least-energy-surface" characterizes the surface of the acoustic waveguide. The term "least-energy-surface" implies that it can only be an approximation, particularly when the waveguide has additional design constraints, such as for example, the surface being coincident with the four control curves and continuous between the throat and the mouth. The examples listed in the specification describe ways of designing the waveguide so as to result in a "least-energy-surface."

According to the first example, the waveguide has a "least-energy-surface" when the surface is made so that it "passes through the specified controlling geometry in a manner that provides the minimum change in curvature when the rate of change of local curvature is integrated in the mathematical sense (summed) over the entire surface." One of ordinary skill in the art would know that in the process of designing the surface, it would be a "least-energy-surface" if the surface has a minimum change in curvature when the rate of change of local

PATENT
PATENT APP. SER. NO. 10/046,404
ECLIPSE GROUP DOCKET NO. H103027USU (P02017US)

curvature is integrated over the entire surface. The first example does not imply that a truly minimal least-energy-surface was achieved, only that the surface was designed to be a "least-energy-surface" by minimizing the change in curvature when the rate of change of local curvature is integrated over the entire surface.

According to the second example, alternative mathematical criteria are provided for forming the surface so that it is a "least-energy-surface." The alternative mathematical criteria includes forming the surface to conform to "the simplest equations representing the surface" and further providing that "... this may be represented by the lowest order polynomial, or the factored expression with the least number of poles and zeroes that causes a surface to go through the curves." Again, according to the second example, the surface is *designed* to have a "least-energy-surface."

Whether the first example or the second example, or any other example, is used in designing the surface, the result is likely an approximation. It may be possible to achieve a surface that is a lower energy surface. However, there would only be infringement if the other elements of the claim were met.

Applicants note that the term "least-energy-surface" is no longer a claim term. Therefore, the Board's rejection is now moot.

II. REJECTION OF CLAIMS 1, 7, AND 12-14 UNDER 35 U.S.C. §102

As noted above, the Board did not reach the rejection of the claims on appeal. Applicants appealed the Examiner's rejection of claims 1-8, 11-28 as anticipated under 35 U.S.C. § 102(a) by Klayman, U.S. Patent No. 3,930,561, which is dated January 6, 1976, and titled *Low Distortion Pyramidal Dispersion Speaker* (hereinafter "Klayman"). Applicants have amended claims 1, 7, and 12-14 by deleting the term "least-energy-surface," which the Board found indefinite. Applicants respectfully submit that this amendment does not significantly affect the substance of Applicants' arguments that claims 1, 7 and 12-14 are not anticipated.

Applicants argued in their appeal briefs that Klayman fails to teach a surface that is 1) continuous, and is 2) a *least-energy-surface*, where the surface is coincident with control curves that intersect a throat and a mouth. Claims 1, 7, and 12-14 have been amended and no longer recite "a least-energy-surface." Claims 1, 7, and 12-14 now recite "a continuous three-

PATENT
PATENT APP. SER. NO. 10/046,404
ECLIPSE GROUP DOCKET NO. H103027USU (P02017US)

dimensional surface.” However, the surface remains defined by, formed by, or coincident with the four control curves that intersect the throat and mouth. Klayman does not teach or suggest the claimed “continuous three-dimensional surface.” Therefore, Klayman does not anticipate amended claims 1, 7, and 12-14.

PATENT
PATENT APP. SER. NO. 10/046,404
ECLIPSE GROUP DOCKET NO. H103027USU (P02017US)

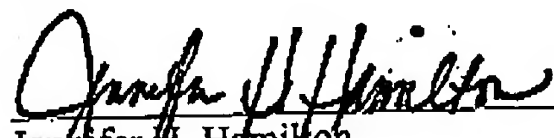
CONCLUSION

Favorable consideration is respectfully requested in view of the following amendments and remarks.

The Commissioner is authorized to charge any additional fees that may be required, or credit any overpayment, to our deposit Account No. 50-2542. A copy of this sheet is enclosed.

Respectfully submitted,

Dated: 10/20/09


Jennifer A. Hamilton
The Eclipse Group LLP
10605 Balboa Blvd., Suite 300
Granada Hills, CA 91344
(818) 488-8141 Telephone
(818) 332-4205 Fax
jhh@eclipsegrp.com

Customer No.: 34408

PATENT
PATENT APP. SER. NO. 10/046,404
ECLIPSE GROUP DOCKET NO. H103027USU (P02017US)

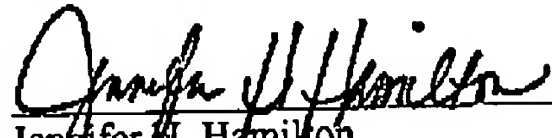
CONCLUSION

Favorable consideration is respectfully requested in view of the following amendments and remarks.

The Commissioner is authorized to charge any additional fees that may be required, or credit any overpayment, to our deposit Account No. 50-2542. A copy of this sheet is enclosed.

Respectfully submitted,

Dated: 10/20/09


Jennifer H. Hamilton
The Eclipse Group LLP
10605 Balboa Blvd., Suite 300
Granada Hills, CA 91344
(818) 488-8141 Telephone
(818) 332-4205 Fax
jhh@eclipsegrp.com

Customer No.: 34408